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RICHARD AUCHTERLONIE  
NOVAK DRUCE LLP  
1000 LOUISIANA  
SUITE 5320  
HOUSTON, TX 77002

EXAMINER

WRIGHT, ANDREW D

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/721,779

Applicant(s)

ZAMAN ET AL.

Examiner

Andrew Wright

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 3, 4 and 20-24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/24/04, 9/10/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I (claims 1, 2, 5-19) in the reply filed on 9/10/04 is acknowledged. The traversal is on the ground(s) that the two inventions have the same classification. This is not found persuasive because even though the two inventions have the same classification, they require a different search. The underwater reel/winch requires a separate search where no pertinent art to the other subject matter exists.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 3, 4, and 20-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 9/10/04.

### ***Drawings***

3. The drawings were received on 9/10/04. These drawings are acceptable.

### ***Claim Objections***

4. Claim 13 is objected to. Claim 13 recites "the deck". There is insufficient antecedent basis for this limitation in the claims. It will be assumed that claim 13 depends from claim 12, not claim 5. Appropriate correction is required.

5. Claim 14 is objected to. Claim 14 recites "the first chain component". There is insufficient antecedent basis for this limitation in the claims. It will be assumed that the

claim recites "the third chain component". Consistent terminology should be used throughout the claims. Appropriate correction is required.

6. Claim 14 is objected to. Claim 14 recites "the second steel line component". There is insufficient antecedent basis for this limitation in the claims. It will be assumed that the claim recites "the first steel line component". Consistent terminology should be used throughout the claims. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 15 recites the limitation "the rope" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is unclear if "the rope" refers to the mooring line or synthetic rope of claim 5. Claims 16 and 17 depend from claim 15.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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11. Claims 1, 2, 5, 10-13, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Lay et al. (US 6,651,580). Regarding claims 1 and 2, Lay discloses that the invention is for mooring semi-submersible drilling rigs. The rope is wire rope (118). The reel/winch is spool (122). The spool is mounted underwater and operable when submerged. The structure is a semi-submersible platform.
12. Regarding claim 5, see figure 4 and lines 1-15 of column 3. The mooring line apparatus comprises the reel (122), the wire rope (118) and the mooring line (425). The mooring line comprises synthetic rope.
13. Claims 10 and 11, Lay shows a plurality of anchors and mooring lines, and a plurality of pontoons.
14. Claims 12 and 13, Lay shows a deck on the hull and a rig on the deck.
15. Regarding claim 19, see figure 4 and lines 1-15 of column 3. The mooring line apparatus comprises the reel (122), the wire rope (118) and the mooring line (425). The mooring line comprises synthetic rope.

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lay et al. (US 6,651,580). Lay does not explicitly disclose the power mechanism for powering the reel/winch. Lay shows the reel (122) on the submersible part of the hull

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(figs 1A and 1B). The skilled artisan will recognize that a spool requires a motor and brake for controlled winding and unwinding. Lay shows what appears to be a motor and brake (not numbered) beside the spool (122). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lay by providing the submerged spool with a submerged motor and brake for controlling the winding and unwinding of the spool. The motivation would be to provide for controlled winding and unwinding of the spool, as is well known and common in the art.

18. Claims 5, 6, 7, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lay et al. (US 6,651,580) in view of Pollack (US 6,499,418).

Regarding claims 5 and 6, Lay shows a hull with a semi-submersible portion, an anchor apparatus, and a mooring line apparatus. Mooring line apparatus comprises mooring line that comprises wire (118) and chain (114). Mooring line apparatus also comprises underwater spool (122) for winding wire (118). Lay does not disclose the three component line. It is well known and common to use a mooring line that comprises wire rope, chain, and synthetic rope. The reason for the combination of elements is to optimize the strength-to-weight ratio of the line, such that sufficient line strength is achieved with minimal weight. Pollack discloses such a line for use with a floating platform. Pollack teaches the use of a line comprising a steel cable upper part (75), a chain middle section (76) and lower ends (68, 69), and a synthetic rope intermediate section (77). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lay by using a three-component mooring line that comprises wire rope (118), chain (114), and an intermediate synthetic

portion as taught by Pollack. The motivation would be to optimize the strength-to-weight ratio of the mooring line.

19. Regarding claim 7, Lay shows connector (176) that is used between line components (114, 118) and can be handled, connected, and disconnected at the vessel at deck (175).

20. Regarding claim 14, Lay shows a deck with a chain winch (120B) and a steel line winch (120C).

21. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lay et al. (US 6,651,580) in view of Goldsmith (US 4,352,599). Lay discloses the elements of claim 5. Lay does not disclose a tensioning apparatus. Goldsmith shows a floating platform mooring system. Like that of Lay, the Goldsmith mooring system comprises a mooring line and winch. Goldsmith provides a heave compensator (64) for tensioning the mooring lines to prevent snap loads that might occur if the lines become slack. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lay by adding a heave compensator as taught by Goldsmith. The motivation would be to prevent snap loads that might occur if the lines become slack.

22. Regarding claim 16, Goldsmith shows the heave compensator above the waterline.

***Allowable Subject Matter***

23. Claim 18 is allowed.

***Conclusion***

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Petty et al. ('228) shows separate winches for the chain and for the cable. Kitt ('779) shows separate winches for the chain and cable, and a connector between the chain and cable. Krogstad et al. ('768) shows separate winches for the chain and cable, and a connector between the chain and cable. Longberg et al. ('471) shows a winch that is below the waterline. Foster et al. ('293) shows a winch that is below the waterline. Ballantyne et al. ('125) shows a winch that is below the waterline. Wudtke ('586) shows separate winches for the cable and chain. Fulton et al. ('269) discloses three-component anchor line including wire, chain, and synthetic portions. Pollack ('312) discloses three-component anchor line including wire, chain, and synthetic portions. Hanna et al (US 2002/0176747) discloses a semi-submersible platform and teaches that winches can be mounted either on the deck or underwater (fig 3A).

25. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Wright  
Patent Examiner  
Art Unit 3617

*AW 11/8/04*  
**ANDREW D. WRIGHT  
PRIMARY EXAMINER**